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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR.4/817c/CEMENT/2015-16

Date: 18.04.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*AGENCY	:	**Technical Manager (West),** KRIDL, Bangalore.
*NAME OF THE WORK	:	Reserve fund for Emergency Grant in Ward No.13, Improvements to Roads and Drains in Basaveshwara Road L/s, near 8th 'D' Cross road, Balance portion in Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
REFERENCE	:	BBMP/DZ/AEE/SSD/PR/07/2015-16 Dated: 16.04.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	16.04.2015
PERIOD OF TESTING	:	16.04.2015 to 18.04.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	485 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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VISHWANATH .C
Quality Manager

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR.4/817c/SAND-Gradation/2015-16 : 18.04.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Reserve fund for Emergency Grant in Ward No.13, Improvements to Roads and Drains in Basaveshwara Road L/s, near 8th 'D' Cross road, Balance portion in Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/SSD/PR/07/2015-16 Dated: 16.04.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 16.04.2015

Date of Testing : 18.04.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.36	90-100	90-100	90-100	95-100
2.36	82.12	60-95	75-100	85-100	95-100
1.18	60.43	30-70	55-90	75-100	90-100
600 Micron	28.16	15-34	35-59	60-79	80-100
300 Micron	14.62	5-20	8-30	12-40	15-50
150 Micron	7.10	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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VISHWANATH .C
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AE-13
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T-2377

Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR.4/817c/AGG/GR/2014-15 : 18.04.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Reserve fund for Emergency Grant in Ward No.13, Improvements to Roads and Drains in Basaveshwara Road L/s, near 8th 'D' Cross road, Balance portion in Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/SSD/PR/07/2015-16 Dated: 16.04.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 16.04.2015

Date of Testing : 18.04.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.05	95-100	85-100
20	49.55	30-70	0-20
10	22.10	10-35	0-5
4.75	2.50	0-5	-

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* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.13/KRIDL/STEEL/2014-15 20.04.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the work	:	Reserve fund for Emergency Grant in Ward No.13, Improvements to Roads and Drains in Basaveshwara Road L/s, near 8th 'D' Cross road, Balance portion in Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/SSD/PR/07/2015-16 Dated: 16.04.2015
Date of Test	:	20.04.2015
Technical Reference	:	IS: 1786-2008

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Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	8	0.40	510	552	13.25	O.K	O.K

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Job No.: CTCE/BBMP/W.No.13/KRIDL/STEEL/2014-15 20.04.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the work	:	Reserve fund for Emergency Grant in Ward No.13, Improvements to Roads and Drains in Basaveshwara Road L/s, near 8th 'D' Cross road, Balance portion in Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/SSD/PR/07/2015-16 Dated: 16.04.2015
Date of Test	:	20.04.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	556	13.60	O.K	O.K

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AE - 13
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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR.4/817c/CUBE/2014-15 20.05.2015

TEST REPORT ON COMPRESSIVE STRENGHT OF CONCRETE CUBES

*** Client** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of the work** : Reserve fund for Emergency Grant in Ward No.13, Improvements to Roads and Drains in Basaveshwara Road L/s, near 8th 'D' Cross road, Balance portion in Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/SSD/PR/07/2015-16 Dated: 16.04.2015

*** Sample ID** : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as o : 28^{th} day

Sample Received on : 22.04.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.04.2015	20.05.2015	8.174	487.5	21.67
2	22.04.2015	20.05.2015	8.269	502.3	22.32
3	22.04.2015	20.05.2015	8.348	511.6	22.74

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VISHWANATH .C
Quality Manager

AE-U3
20.5.15
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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR.4/817c/CUBE/2014-15 25.05.2015

TEST REPORT ON COMPRESSIVE STRENGHT OF CONCRETE CUBES

* Client	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of the work	: Reserve fund for Emergency Grant in Ward No.13, Improvements to Roads and Drains in Basaveshwara Road L/s, near 8th 'D' Cross road, Balance portion in Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/SSD/PR/07/2015-16 Dated: 16.04.2015
* Sample ID	: Road Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{20}
Compressive Strength as o	: 28^{th} day
Sample Received on	: 27.04.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.04.2015	25.05.2015	8.295	495.3	22.01
2	27.04.2015	25.05.2015	8.476	517.9	23.02
3	27.04.2015	25.05.2015	8.312	506.7	22.52

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25/5/15
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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR.4/817c/Pre slab/2015-16

04.05.2015

TEST REPORT ON CONCRETE CORE (PRECAST SLAB)

* Name of Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Name of Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of work	:	Reserve fund for Emergency Grant in Ward No.13, Improvements to Roads and Drains in Basaveshwara Road L/s, near 8th 'D' Cross road, Balance portion in Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
Referece	:	BBMP/DZ/AEE/SSD/PR/07/2015-16 Dated: 16.04.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Precast Slab
Sample received on		01.05.2015
Date of Testing	:	04.05.2015
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	79.00	0.392	2527.14	1.58	0.955	32.35	16.48	17.79	16.99	21.24
2	50.00	81.00	0.402	2527.62	1.62	0.960	32.70	16.65	17.99	17.27	21.58
3	50.00	82.00	0.410	2546.48	1.64	0.965	33.45	17.04	18.40	17.75	22.19

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